Lake Okeechobee Tributaries TMDLs
Summary of Comments

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Responsiveness Summary

EPA Region 4 received comments on the proposed "Total Maximum Daily Load (TMDL) for Biochemical Oxygen Demand, Dissolved Oxygen, Nutrients and Unionized Ammonia in the Lake Okeechobee Tributaries" from over 100 private citizens, state and local agencies and industries and their representatives. It is not possible to address each comment individually rather all comments were reviewed and sorted into groups of similar comments. Since TMDLs were proposed in September 2006, FDEP has presented EPA with an alternate approach to target development that uses reference streams validated with biological and chemical data. This approach is a better interpretation of Florida's narrative water quality standard (WQS) and demonstrates concentrations of Total Phosphorus (TP) and Total Nitrogen (TN) that are inherently protective of flora and fauna. EPA considers FDEP's approach to have considerable technical merit and consistent with EPA Ecoregion Reference Condition approach. Many of the comments EPA received on the TMDLs concerned the approach used to derive TP and TN targets. It is not necessary to address these comments on the proposed approach in great detail since it was not used in the final TMDLs.

EPA is finalizing the impaired tributaries located north of Lake Okeechobee as well as those WBIDs located south of the lake in the Everglades Agricultural Area (EAA) in the S-2, S-3, and S-4 basins that have the potential to back pump water to the lake. Of the TMDLs EPA proposed in September 2006, pump stations in the S-2, S-3, and S-4 basins are located in WBIDs 3248, 3251, and 3246, respectively. EPA is not establishing instream targets for the WBIDs containing these pump stations, as work is ongoing to quantify nutrient loads that are protective of the designated uses of the EAA canals. TMDLs establishing instream targets for impaired WBIDs in the EAA will be finalized with the Everglades TMDLs EPA proposed in September 2007. EPA received many comments on the nutrient targets proposed for the WBIDs south of the lake as well as the relevance of considering these waters comparable to the ones north of the lake. EPA agrees waters in the EAA are not comparable to waters north of the lake and because these TMDLs are not being finalized in this submittal, the response to these types of comments is not provided in great detail.

Comments and Responses:

1. **Comment:** EPA misinterpreted the State of Florida's narrative criteria. The method used for setting numeric criterion for nutrients is not based on ecological health or biological response in the stream. By basing the target concentrations on the average of 3 methods, all of which have major flaws, is not scientifically defensible and will not withstand an administrative challenge. For example, the selection of the 25th percentile concentrations results in values lower than reference site approach, implying concentrations lower than natural background which is strictly forbidden by Florida law.

Response: EPA is finalizing the TMDLs based on an approach FDEP has refined since the TMDLs were proposed in September 2006. In this approach, FDEP adapted the EPA Ecoregion Reference Condition approach, applied it to the Central Peninsula Bioregion, and projected a range of values for TN and TP that the State considers protective of aquatic life in streams of that

bioregion (FDEP, 2007). EPA considers the State's approach to have considerable technical merit, and while EPA encourages the State to continue refinement of the approach, EPA views the preliminary values projected from the process to represent the best information currently available on a level of nutrients protective of aquatic life in streams of the Central Peninsula Bioregion of Florida. EPA is using these values in conjunction with other factors to assure downstream use protection in choosing appropriate targets for this TMDL.

The reference approach described in the FDEP Technical Support Document (FDEP, 2007) results in a proposed range of values for TP of 84 ug/L to 128 ug/L; and a range of values for TN of 1.3 mg/L to 2.0 mg/L. In this document, FDEP states that it is very confident the native flora and fauna are fully protected within these ranges of concentrations. EPA selected a TP target of 113 ug/L and a TN target of 1.2 mg/L to protect aquatic life in the tributaries as well as downstream uses.

2. **Comment:** Waterbodies north and south of Lake Okeechobee are Class IV waters but the TMDL inappropriately assigns Class III standards to these waters.

Response: EPA is required to prescribe TMDLs that are protective of downstream uses. The TMDLs are not allocating to Class IV waters but WQS must be met at the point where the Class IV waters discharge into Class III waters. TMDLs are assigned to waters on the 1998 303(d) list. According to this list, the impaired waters have a Class III designation.

3. **Comment:** EPA violates the Data Quality Act (DQA) by including data collected at groundwater sites, rainfall sites, and Class IV waters. In addition, data used in the analysis included negative values, zero values and values below the minimum detection limit.

Response: The State of Florida has an EPA-approved Quality Assurance Project Plan (QAPP) for its ambient monitoring program. It is our understanding that compliance with the QAPP ensures the integrity of the water quality data made available to EPA and the public. The final TMDL targets are based on FDEP's adaptation of EPA's Ecoregion Reference Condition approach and not a percentile of an all-stream dataset. Water quality data collected in these reference streams were used to derive nutrient targets that FDEP is confident will protect the native flora and fauna. FDEP verified that water quality data used to characterize the reference streams represents instream concentrations and not groundwater sites, rainfall sites, or Class IV waters.

4. **Comment:** EPA should voluntarily prepare a National Environmental Policy Act (NEPA) Environmental Assessment (EA) or Environmental Impact Statement (EIS) for the tributaries before developing TMDLs. EPA is legally obligated to prepare an EA or EIS in all research and development activities as well as when the agency issues NPDES permits. Because permit limits are determined from TMDLs, the environmental impacts of the proposed TMDLs should be taken into consideration as a whole, before the discharge limits are set.

Response: The source of poor water quality in the tributaries is a result of nonpoint source pollution. There currently are no NPDES facilities discharging in the watersheds of the impaired

WBIDs and an EA or EIS is not required. TMDLs consider the environmental impacts as the TMDL provide the targets that meet water quality standards. **More on this from Carol**

5. **Comment:** The TMDL rule has a potentially negative effect on current and proposed state projects for protecting water quality. Specifically, the USEPA uses the out-of-date 1998 Impaired Waters List; and undermines the newly enacted Everglades Watershed Restoration Act.

Response: TMDL development in the State of Florida is driven by EPA's commitments in the 1998 Consent Decree (CD) in the Florida TMDL lawsuit. The CD schedule for TMDL development is based on the 1998 303(d) list. EPA considers changes in water quality standards when determining the status of waters on this list. For example, the State of Florida recently dropped its WQS for total coliform; therefore, EPA and the State no longer develops TMDLs for total coliform as a WQS no longer exists. TMDLs can be modified at any time based on new data or scientific information. EPA is not ignoring the State TMDL process, but because of the Consent Decree schedule EPA is required to develop TMDLs for waters on the 1998 303(d) list if the State does not develop the TMDL. The TMDLs for the tributaries discharging to Lake Okeechobee are based on achieving the annual loads allocated in the Lake Okeechobee TMDL. The nutrient concentrations targeted in the TMDL achieve WQS in the tributaries and do not undermine treatment options proposed to meet the TMDL for Lake Okeechobee, as 113 ppb TP in the tributaries will not meet 40 ppb TP in Lake Okeechobee without regional treatment. The funding provided in the 2007 Everglades Watershed Restoration Act will allow for implementation of the Lake Okeechobee TMDL that will result in water quality improvement to the lake and surrounding watershed.

6. **Comment:** The TMDLs will result in economic hardship on farmers and drive them out of business.

Response: The intent of the TMDLs is not to penalize businesses in the watershed but to set limits that will not degrade water quality in the streams based on the standards established by the State of Florida. The Clean Water Act forbids any industry or municipality from causing or contributing to water quality impairment. The Lake Okeechobee watershed is stressed from years of neglect and poor water quality management. The reductions prescribed in the TMDL may seem high but they are considered conservative as they do not account for improvements resulting from current or future implementation strategies.

7. **Comment:** The three approaches used to derive the nutrient targets and the averaging of the results of these approaches does not meet the 40 ppb TP goal for the lake.

Response: The nutrient targets established for the tributaries are protective of ecological health in the tributaries themselves. The TP target in the tributaries TMDL and the concentration in the Lake Okeechobee TMDL of 40 ppb are not comparable, as in order to meet the lake TMDL the water discharging from the tributaries will need to be routed through stormwater treatment areas or reservoirs before it ever discharges into the lake. To ensure compliance with the Lake Okeechobee TMDL, TP loadings, equivalent to those prescribed in the Lake Okeechobee Protection Plan (LOPP) are assigned at the pore point of the WBID or WBIDs comprising a

LOPP basin. Although the TP concentration in the tributaries is 113 ppb the average annual load discharging from the basin cannot exceed the load allocated in the LOPP at the pore point of a basin. For example, WBID 3204 encompasses the entire LOPP C-41 basin and is prescribed an annual average TP load of 6.17 metric ton/yr. This load is based on an annual discharge of 49,799 acre-ft/yr. If this discharge was used to calculate the TMDL load using a TP concentration of 113 ppb, the annual average TP load out of the basin would be 6.94 metric ton/yr, and this would violate the Lake Okeechobee TMDL. Therefore, to achieve the LOPP load additional BMPs are required in the WBID to reduce either the flow or concentration.

8. **Comment:** EPA is proposing TMDLs for waters that are not impaired by FDEP.

Response: The TMDLs are prescribed for waters on the 1998 303(d) list. Prior to developing these allocations, EPA reviewed all readily available data and made an independent assessment of the status of the waters. TMDLs were not prescribed for waters meeting WQS, rather a TMDL not needed determination was concluded or if FDEP was planning on delisting the water, a confirmation of this was made.

9. **Comment:** What is EPA's rationale for proposing TMDLs beyond Consent Decree requirements? Many of the TMDLs are developed for waterbodies not located in tributaries addressed in the Consent Decree.

Response: The State of Florida uses Water Body IDentification (WBID) numbers to list waterbodies on the 303(d) list. Often a WBID may contain one or more tributaries, but because the list is based on WBID numbers and not stream name, the TMDL is proposed for the WBID. All of the TMDLs prescribed in the document are WBIDs included on the 1998 303(d) list. In some cases, the State of Florida has subdivided WBIDs into multiple WBIDs. EPA is prescribing TMDLs to cover the area originally included on the 1998 list.

10. **Comment:** The legal status of EPA-generated TMDLs is not clear. Neither the Florida Watershed Restoration Act nor the consent decree addresses TMDL implementation. While the TMDL represents a plan it does not contain legal mechanisms that will reduce pollution. We expect that this lack of clarity with regard to the legal status and effect of EPA-proposed TMDLs will delay even further the implementation of desperately needed TMDLs in the Lake Okeechobee tributaries.

Response: The Clean Water Act does not grant EPA the authority to implement TMDLs for nonpoint sources. Although the TMDLs are being finalized by EPA, they will be implemented by the State of Florida through their B-Map process. The TMDL document represents a plan prescribing the needed reductions in pollutant loadings that will achieve WQS in the tributaries. In 2007, the State of Florida passed the Watershed Protection Act (SB392) that provides funding to implement the Lake Okeechobee and river watershed plans. This Act represents the legal mechanism under which implementation of the TMDLs should occur.

11. **Comment:** The proposed TMDLs do not contain any mechanism to actually reduce loads for non-point sources despite the fact that TMDLs are suppose to reduce loads from all pollutant sources.

Response: The Clean Water Act does not grant EPA the authority to regulate nonpoint sources. The State of Florida is responsible for TMDL implementation regardless if EPA develops the TMDL.

12. **Comment:** Any new Environmental Resource Permits should contain a mandatory regulatory BMP component that specifically includes conditions that prevent any offshore drainage of water.

Response: Environmental Resource Permits are state-issued permits and EPA has no oversight role as to the conditions of these permits. FDEP will be responsible for implementing the TMDLs and will likely rely on the control strategies outlined in the LOPP to prevent poor water quality from discharging into the downstream estuaries.

13. **Comment:** There is concern that EPA is in violation of the Endangered Species Act consultation requirements in developing the proposed TMDLs. The proposed TMDL is silent with regard to the impacts of the TMDLs on endangered species in Caloosahatchee River and Estuary.

Response: The TMDLs are protective of endangered species by establishing pollutant concentrations that achieve WQS. An assumption of the TMDLs is if WQS are achieved in the tributaries the pollutant loadings to Lake Okeechobee and the downstream estuaries will be significantly reduced, thus protecting endangered species.

14. **Comment:** It is not appropriate to set nutrient targets for the waters in the Everglades Agricultural Area equivalent to the targets set for waters north of the lake.

Response: EPA agrees with this comment and plans to repropose the TMDLs for waters south of Lake Okeechobee with the exception of those WBIDs that back pump water to Lake Okeechobee (i.e., S-2 and S-3 basins). Nutrient targets set for waters in the EAA will be comparable to those proposed for other EAA WBIDs in September 2007.

15. **Comment:** The passage of the 2007 Watershed Protection Act (SB 392) states that implementation of the Lake Okeechobee and River Watershed Plans and related BMAPs provide a reasonable means of achieving the TMDLs and maintaining compliance with state WQS. EPA's proposed nutrient TMDLs will undermine this comprehensive legislation and legislative efforts to have the water cleaned before it reaches Lake Okeechobee and the estuaries, by setting nutrient effluent limits for the water before it reaches the proposed regional treatment sites.

Response: The TMDLs address a means for achieving water quality standards in the tributaries draining to Lake Okeechobee. It is unlawful for uncontrolled sources of pollution to cause or contribute to water quality violations. The proposed nutrient concentrations are protective of the narrative nutrient criteria in the tributaries but are not stringent enough to meet the requirements established in the TMDL for Lake Okeechobee (i.e., 40 ppb TP) without the proposed regional treatment sites. EPA considered the State of Florida's plans to build regional treatment sites

around Lake Okeechobee by setting the TP concentration in the tributaries at a concentration much greater than 40 ppb TP.

16. **Comment:** The proposed TMDLs are insufficient and will not benefit the Caloosahatchee Estuary in a significant way for two years. The proposed TMDLs do not decrease the nutrients in discharges to the Caloosahatchee and fails to address loads to the Caloosahatchee from C-43 Basin.

Response: The Florida Legislature is requiring FDEP to develop a TMDL for the C-43 basin (Caloosahatchee River) by December 31, 2008. EPA did not include this basin in the Lake Okeechobee tributary TMDLs as it was not on the Consent Decree schedule. Implementation of the tributary TMDLs should result in reduced nutrient loadings to Lake Okeechobee which should reduce the loadings delivered to the downstream estuaries.

17. **Comment:** EPA's approach to deriving nutrient targets by averaging 3 independent methods is not scientifically defensible, and would not withstand an administrative challenge.

Response: In the proposed TMDL, EPA solicited comments on the method of targeting the line of evidence approach. EPA acknowledged that FDEP was developing nutrient targets using an Ecoregion Reference Condition approach that may result in nutrient concentrations representative of actual biological condition. While FDEP's criteria development process is ongoing and incomplete, the State offered EPA certain preliminary information for consideration as targets for the tributary TMDLs. FDEP adapted the EPA Ecoregion Reference Condition approach, applied it to the Central Peninsula Bioregion, and projected a range of values for TN and TP that the State considers protective of aquatic life in streams of that bioregion (FDEP, 2007). EPA considers the State's approach to have considerable technical merit, and while EPA encourages the State to continue refinement of the approach, EPA views the preliminary values projected from the process to represent the best information currently available on a level of nutrients protective of aquatic life in streams of the Central Peninsula Bioregion of Florida. As a result, EPA is finalizing the TMDLs using the targets selected from FDEP's approach and not the 3 independent methods proposed in the TMDLs.

18. **Comment:** EPA has re-opened the previously approved Lake Okeechobee TMDL and has re-allocated the allowable load by prescribing TN allocations without justification.

Response: EPA is prescribing TN reductions for select tributaries to Lake Okeechobee and these do not equate to the entire TN loads into Lake Okeechobee as major tributaries such as Fisheating Creek are not included in the TMDL. If EPA was re-allocating the allowable TN load discharging into Lake Okeechobee it would need to consider all sources and this was not done. The tributaries are assigned TN and TP allocations necessary to achieve WQS that account for both near and far field effects.

19. **Comment:** The proposed TMDLs and related agency action by EPA does not meet the Administrative Procedure Act's standard of review and would be found arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.

Response: EPA went above and beyond the requirements of the Administrative Procedure Act by accepting public comments on the proposed TMDLs for 8 months (Oct. 1, 2006 through May 31, 2007). The public period for submitting comments on TMDLs is typically 60 days.

20. **Comment:** The methods used by the EPA to propose the TMDLs are contrary to the state-adopted and EPA-approved narrative nutrient criterion for water quality. We would like to note the concerns expressed by the FDEP in its April 2007 draft Technical Support Document on the Deviation of the Numeric Nutrient Thresholds for TN and TP in Lake Okeechobee Tributaries. The FDEP indicates its "serious concerns regarding the scientific defensibility of this method".

Response: EPA acknowledges the approach used in the proposed TMDLs is more related to conditions expected to approximate background and not related to an actual biological condition. EPA considers FDEP's approach to have technical merit and EPA is finalizing the TMDLs for the tributaries using targets selected from the range of values presented in the Technical Support Document.

21. **Comment:** If EPA adopts the proposed tributary TMDLs and re-allocates the Lake Okeechobee phosphorus TMDL, these should be adopted as phased TMDLs.

Response: EPA is not re-allocating nutrient concentrations or loads to Lake Okeechobee, rather the TMDLs developed for the tributaries compliment the established TMDL for the lake by prescribing loadings consistent with those outlined in the Lake Okeechobee Protection Plan. Although the TMDL is not referred to as a phased TMDL, implementation will likely occur in phases. Once a TMDL is approved it can be re-opened at any time as new data and scientific techniques are developed.

22. **Comment:** Submission of new data requires a new comment period. On May 8, 2007 EPA transmitted to interested parties new data that EPA is relying upon for the proposed TMDLs. Up until that point, U.S. Sugar was reviewing the database that EPA provided in September 2006. Because of the highly technical nature of the proposed TMDL, U.S. Sugar has begun the data review process all over again utilizing the May 8th data. Because of the late data that EPA provided this data, there is insufficient time to review and conduct a comparison of the two datasets before the May 31, 2007 close of the public comment period. This is a violation of the requirements contained in the Administrative Procedure Act. EPA's reliance on the May 8th dataset, to support its proposed TMDL is contrary to law and arbitrary and capricious and will not withstand an administrative challenge.

Response: Florida's IWR database is accessible to the public through their website and EPA and other interested parties are able to down load the data at any time. During the public comment period EPA updated the all streams data approach using a more current IWR database than what was proposed to include more current data. In addition, the later IWR runs have better QA/QC than earlier runs, thus eliminating suspect data (i.e., sampling sites assigned to wrong WBIDs, data qualifiers, etc). In the final TMDLs, EPA is relying on targets identified by FDEP as protective of WQS in the tributaries. These targets are projected from a distribution of data

collected in streams identified by FDEP as Reference Streams based on high levels of biological integrity and low levels of human disturbance.

23. **Comment:** The proposed TMDLs are disruptive of the State's much broader and comprehensive watershed plan and will misdirect limited resources to activities in waterbodies that are not impaired or are a much lower priority.

Response: The proposed TMDLs are for waters included on the 1998 303(d) list and all have a high priority. EPA does not consider the TMDLs disruptive to the State's watershed plans as the TMDLs provide a target for achieving WQS in the individual tributaries and rely on the control strategies identified in the comprehensive Lake Okeechobee watershed plan for implementation.

24. **Comment:** EPA should defer to the State of Florida's schedule for TMDL development in EAA WBIDs.

Response: The State of Florida is required by the Consent Decree to propose TMDLs for waters on the 1998 303(d) list according to a schedule developed by the court. If FDEP fails to propose TMDLs according to this schedule, EPA is responsible for proposing TMDLs by September 30th of each year. TMDLs scheduled for proposal on September 30, 2006 included some, but not all, waters in the Everglades Agricultural Area (EAA) and this is why EPA often proposed TMDLs ahead of FDEP.

25. **Comment:** In developing the target using an ecoregion approach, EPA needs to exclude data collected in Ecoregion 76a as this area is not representative of the tributaries north of the lake.

Response: EPA's final nutrient targets for the tributaries are based on reference stream data collected in the Central Peninsula Bioregion. This bioregion does not include Ecoregion 76a.

26. **Comment:** The landuse modeling tool (PLOAD) used to derive the numerical targets is too simplistic and has numerous errors.

Response: The intent of using the PLOAD model to derive numeric targets was to compare results from a simplistic approach to those calculated using water quality data. However, the final TMDL targets are based only on reference streams as provided by FDEP. Results from the PLOAD modeling tool were not used to set nutrient targets in the final TMDL.

27. **Comment:** FDEP proposed delisting requests for Dissolved Oxygen (DO) in WBIDs 3186B and 1436 yet EPA is proposing TMDLs for these waters.

Response: FDEP has not formally submitted its delisting requests for waters in the Group 4 basin for which the WBIDs in question are located. EPA cannot approve a list that has not been submitted; therefore, the basis of the originally listing remains until EPA is formally requested to act on the issue. At the time the TMDLs were prepared, EPA did an independent assessment of the data collected in the waterbody to determine if a TMDL was needed or not. Based on the data included in IWR Run 24 (this was the most current database FDEP had at the time the

TMDLs were being developed), EPA concluded that the waters were impaired for DO and a TMDL was necessary. EPA will act on the delisting request and not finalize the DO TMDLs for these two WBIDs if FDEP formally submits its delisting package to EPA before the TMDLs are finalized.

28. **Comment:** The Waste Load Allocation (WLA) assigned to the City of Clewiston is difficult to meet through the application of Best Available Technology that is Economically Feasible (BATEA).

Response: EPA is finalizing a TMDL for WBID 3246 that allocates an annual average load at the pump station in the S-4 Basin. The TMDLs for WBID 3246 only addresses back pumping into Lake Okeechobee and does not establish instream targets that are protective of the WBID. In addition, the TMDL does not allocate a WLA for the City of Clewiston. EPA proposed the TMDL for WBID 3246 in advance of Consent Decree requirements. Based on public comments, EPA concluded it would be more appropriate to finalize this WBID once FDEP establishes the TMDL for the Caloosahatchee Estuary. The TMDL for WBID 3246 is due in September 2012.

29. **Comment:** The use of the Redfield Ratio is an inappropriate method for deriving the nitrogen TMDLs because the classic ratios are generally valid for oceans and large lakes, but not for small bodies of waters such as the Lake Okeechobee tributaries. The TN TMDL target was derived by simply multiplying the TP TMDL target concentration by 16 (the Redfield Ratio of 16:1).

Response: The purpose of the Redfield Ratio analysis in the TMDL report was to provide a general statement about the frequency of time data collected in the tributaries were phosphorus limiting, nitrogen limiting or co-limiting. If the frequency of phosphorus limiting was greater than 90 percent, it was not necessary to control nitrogen to achieve the nutrient criterion. The TN target concentration was calculated using the same three independent approaches used to calculate the TP target concentration. It is only by coincident that multiplying the TP target of 0.077 mg/L by 16 approximates the TN target of 1.2. EPA is finalizing a TP target of 113 ppb for the tributaries and if this was multiplied by 16 the resulting TN concentration would be 1.8 mg/l. This value is much higher than the TN concentration in the final TMDL of 1.2 mg/l.

30. **Comment:** FDEP in May 2007 submitted a document entitled *Technical Support Document: Derivation of the Numeric Nutrient Thresholds for Total Nitrogen and Total Phosphorus in the Lake Okeechobee Tributaries.* In this document, FDEP proposes an alternative method to derive nutrient targets for the tributaries that they believe represents an appropriate interpretation of the Florida's narrative criterion for nutrients. The State of Florida determined that TP concentrations representing the 75^{th} and 90^{th} percentile of data collected at reference sites are in the range of 84 ppb to 128 ppb and TN concentrations in the range of 1.3 mg/L and 2.0 mg/L are protective of the native flora and fauna. FDEP is confident that nutrient concentrations in these ranges are fully protective.

Response: EPA considers the information contained in the Technical Support document as having technical merit and is finalizing the TMDLs using a TP concentration of 113 ppb for the tributaries and a TN concentration of 1.2 mg/l to protect the downstream estuaries. The TN

concentration in the final TMDL is slightly less than what FDEP suggests is protective of WQS in the tributaries but because the Lake Okeechobee TMDL does not control nitrogen loadings it was imperative that TN loadings to the lake be addressed in the tributaries TMDLs.

31. **Comment:** The TMDL for phosphorus has been set by Florida's Lake Okeechobee Protection Plan at 40 ppb for the lake itself. Therefore, it seems completely nonsensical to me that the USEPA is proposing TMDLs for phosphorus in these tributaries that flow into the lake at 77 ppb. How will the levels of phosphorus magically drop to 40 ppb once the water reaches the lake? They will not. The proposed TMDL of 77 is not acceptable. Likewise, the TMDL for nitrogen in the tributaries is recommended to be set at a more lenient level than it is in the lake. EPA needs to go back to the drawing board.

Response: The TMDL target concentrations proposed for the tributaries are at levels that will achieve WQS in the tributaries. For some WBIDs, the target TP concentration is set at a level higher than the target concentration based on load in the LOPP (see Table 3 in the TMDL report); however, before the water discharging from the impaired tributaries will flow into Lake Okeechobee it will likely be routed through a STA or reservoir in order to meet the loading required in the Lake Okeechobee TMDL. Other impaired WBIDs have TP concentrations that are much lower than those assigned to the LOPP basins and as a result additional BMPs will be needed in these WBIDs to achieve the tributaries TMDLs.

32. **Comment:** EPA has to wake up to the fact we are being poison everyday by your lack of action. You must set higher standards and ENFORCE the laws to ensure a better quality for us, Lake O, the Caloosahatchee River and Estuary and St. Lucie Estuary. It is your job to stop the polluting. DO IT.

Response: The purpose of the TMDL is to set limits that will achieve water quality standards in the tributaries draining to Lake Okeechobee and assure protection of downstream uses. FDEP is currently developing TMDLs for the St. Lucie and Caloosahatchee estuaries. If these TMDLs require further reductions from the Lake Okeechobee tributaries it may be necessary to revise both the Lake and tributary TMDLs.

33. **Comment:** For the Class III canals (Miami, North New River, Hillsboro and West Palm Beach) the EPA cannot define natural populations since these canals are wholly man-made and do not have natural populations of flora and fauna. By design, these canals are water conveyance structures rather than natural rivers or streams. Furthermore, FDEP has documented that the fauna found in canals in south Florida are uncorrelated to water quality. Given EPA's failure to show any direct relationship between the TMDL target concentration and any measurement of flora and fauna, we believe the proposed TMDL is arbitrary and capricious.

Response: EPA is not finalizing TMDLs for the Class III canals in the EAA at this time. EPA plans to finalize these TMDLs with those proposed in September 2007 for the Everglades. FDEP needs to develop new water quality standards for canals or change the designated use of the canals to something that reflects that they are conveyance structures and water quality in the canals is not comparable to natural rivers or streams. Until this occurs, EPA and the states are

required to develop TMDLs to the applicable WQS, and for these WBIDs the WQS is the same for a natural river as it is for a canal.

34. **Comment:** We ask that EPA retract its proposed TMDLs and allow FDEP to develop appropriate TMDLs for the region using methodologies that are consistent with those that have been used in other parts of the state. Using the process outlined in the Florida Watershed Restoration Act, we believe that science-based TMDLs can be established in a reasonable time frame and that this can be accomplished with the support of affected stakeholders who will be expected to achieve the established water quality goals.

Response: The consent decree schedule developed in response to the Florida TMDL lawsuit (Florida Wildlife Federation, et al. v. Carol Browner, et al., Civil Action No. 4: 98CV356-WS, 1998) requires EPA to propose TMDLs when the State of Florida fails to meet the TMDL commitments. In addition, the lawsuit requires the State or EPA to finalize the TMDLs in a reasonable amount of time. EPA has proposed and is finalizing TMDLs for the tributaries draining to Lake Okeechobee to be in compliance with the Consent Decree. EPA is finalizing the TMDLs for the tributaries using a reference stream approach that FDEP presented in the public comments. FDEP's approach to nutrient targets are consistent with those that have been used in other parts of the state, and EPA believes these new targets result in science-based TMDLs. The Florida Watershed Restoration Act is one possible mechanism FDEP could use to implement the TMDLs for Lake Okeechobee and the tributaries draining to the lake.

35. **Comment:** There are numerous errors in the data used to derive the nutrient targets. For example, there are 6 long-term Lake Okeechobee inflow sites that were excluded in the Basin TMDL calculations based on IWR Run 28 that should have been included, and there were 78 sites in the Upper East Coast Basin included in the analysis but these sites drain to Indian River Lagoon and not Lake Okeechobee. Other sites that were included in the analysis include 3 rainfall sites, 20 groundwater sites, and 10 open water sites. Inclusion of these stations, especially with any justification, invalidates the TMDL calculation, rendering it arbitrary and capricious.

Response: EPA is not finalizing the TMDLs using a percentile approach from an all-streams dataset. The approach used in the final TMDLs is based on FDEP's reference stream approach. FDEP verified all water quality data collected in the individual reference streams were verified before using the data to derive the nutrient targets. The State of Florida has an EPA-approved QAPP for its ambient monitoring program and EPA assumed that the data compiled in the IWR run was checked for accuracy.

36. **Comment:** Florida Wildlife Federation (FWF), Save Our Creeks, Inc. (SOC) and Environmental Confederation of Southwest Florida, Inc. (ECOSWF) support EPA's proposed TMDLs for the tributaries to Lake Okeechobee. The validity of this number (77 ppb total phosphorus) is further verified by the TMDL number (73.5 ppb total phosphorus) determined by our own expert in the administrative litigation in which we successfully challenged FDEP's attempt to set a total phosphorus TMDL for these tributaries of 159 ppb total phosphorus. FWF, SCO, and ECOSWF do not support EPA's use of FDEP's new

methodology for determining the TMDL for Lake Okeechobee tributaries nor do they support TMDL numbers derived using this methodology.

Response: EPA considers FDEP's new methodology for determining nutrient targets to have considerable technical merit and based upon the information currently available, accepts FDEP's demonstration that the nutrient concentrations projected from the process are protective of aquatic life in streams of the Central Peninsula Bioregion. FDEP's new approach to nutrient target development verified the reference streams in the field with site specific biological monitoring. The final TMDLs are based on TP and TN concentrations of 113 ppb and 1.2 mg/l, respectively and these are considered protective of flora and fauna in the tributary, or near field. The TN target is consistent with the target EPA proposed in the St. Lucie TMDL. To ensure protection of downstream waters (i.e., far-field effects) the tributaries TMDLs allocate loadings at the pore points of the WBID(s) consistent with the TP loadings provided in the LOPP. In many of these WBIDs the instream TP concentration of 113 ppb is more stringent than the LOPP target concentration based on load. For example, the LOPP target concentration based on load for the Taylor Creek Nubbin Slough basin is 151.22 ppb but additional BMPs than those prescribed in the LOPP will be needed to achieve the instream TP target of 113 ppb. FDEP has plans to route water discharging from many of the LOPP basins through stormwater treatment areas and/or reservoirs prior to flowing into the lake. This should ensure that the load achieved at the pore points of the WBID(s) comprising an LOPP basin will meet the Lake Okeechobee TMDL.

37. **Comment:** FWF, SOC, and ECOSWF strongly approve of EPA's decision to propose TMDLs for all impaired tributaries of Lake Okeechobee due to deteriorating conditions in the tributaries, the Lake, and the downstream receiving estuaries caused by massive and uncontrolled inflows of phosphorus from phosphorus fertilizer.

Response: Comment noted.

38. **Comment:** EPA should include and reference important reports relevant to development of this TMDL.

Response: EPA has cited references used directly in the development of the TMDL. The document is not intended to be a comprehensive report on the history of the tributaries. The final TMDL report will include a more thorough reference section, as appropriate.

39. **Comment:** Reliable historic data should also be used in EPA's weight of evidence approach, particularly where the data correlates nutrient levels at impaired sites to historic data from the site before impairment.

Response: The Odum report the commenter is referring to was discussed in the TMDL document under the report section entitled "Previous Studies in the Lake Okeechobee Watershed". The historic data presented in the Odum report is from a limited number of sampling events and is not comparable to water quality data collected in the reference streams due to changes in analytical methods and sampling methodology. EPA believes the TP and TN

targets selected in the final TMDLs are an appropriate interpretation of Florida's narrative WQS for nutrients.

40. **Comment:** EPA mistakes the facts concerning the Everglades Agricultural Area.

Response: EPA is not finalizing the TMDLs for the EAA but will note the corrections in future TMDL documents concerning WBIDs in this area.

41. **Comment:** EPA should include in its weight of evidence approach the analysis and findings of FWF's water quality expert who determined that an appropriate TMDL for the tributaries would be 73.5 ppb using EPA's approved 25th percentile reference stream approach.

Response: EPA is not finalizing the TMDLs using nutrient targets derived using an approach based on a percentile of an all streams dataset. EPA believes FDEP has provided sufficient documentation on their reference streams in the Central Bioregion to consider their TP target of 113 ppb protective of flora and fauna in the tributaries

42. **Comment:** EPA should not use the total phosphorus value obtained through FDEP's analysis as the total phosphorus or total nitrogen TMDL in its final rule nor should it rely upon this method for targeting a proposed TMDL number to the exclusion of all other methods.

Response: See response to comment #33. FDEP is in the process of developing numeric nutrient criteria. Depending on the outcome of this process, it may be necessary to revise the TMDLs for the tributaries to ensure consistency with numeric water quality criteria.

43. **Comment:** A federal district court, in a case in which the U.S., on behalf of EPA and the Corps of Engineers, is a party, held that the S-2, S-3, and S-4 pump stations require NPDES permits. As point sources, these structures will require a wasteload allocation.

Response: The court decision referenced in the comment is currently on appeal to the 11th Circuit Court. EPA's position is NPDES permits are not required for these pump stations as these pumps are solely for the transfer of water with no commercial use. EPA considers this argument a valid interpretation of the Clean Water Act's Water Transfer Regulation. If the 11th Circuit Court rules that NPDES permits are required then it will be necessary to modify the TMDLs to assign a WLA to the pump stations.

44. **Comment:** The implementation of the proposed TMDLs will divert critical state dollars to onsite treatment activities that would be far more costly and far less effective than the regional public works facilities, which combined with achievable BMPs can meet the water quality objectives that EPA is proposing.

Response: TMDL implementation is the responsibility of the State of Florida. The strategies discussed in the TMDL report are consistent with those FDEP and the SFWMD site in the LOPP. Edge-of-field treatment activities and other onsite implementation strategies are necessary to control pollutant loads at the source.

45. **Comment:** The fact that an entirely new data set is being utilized by EPA so close to the deadline for the receipt of public comments has resulted in an inability for the public to meaningfully participate or respond to your proposal. We cannot provide a meaningful comment if we do not know what is in the database used by the EPA to establish the TMDLs.

Response: FDEP routinely updates the IWR database as new water quality data become available. The public can access this database through the internet. EPA kept the TMDL open for public comment for 8 months and during that time period responded to FOIA as well as informal requests for the data. EPA believes 8 months was sufficient time for the public to respond to the proposal and this was evident by the volume of comments EPA received on the TMDL.

46. **Comment:** We do not understand why you are applying Class 3 WQS to Class 4 manmade canals north and south of the Lake Okeechobee.

Response: EPA applied Class III water quality standards at the point where the Class IV water discharges into the Class III water and not to the canal itself. Water discharging from upstream waters (in this case, Class IV canal) cannot cause or contribute to a downstream impairment. The TMDLs apply to the Class III waters in the impaired WBIDs.

47. **Comment:** After years of advanced-treated wastewater effluent (ATE) flows and a concomitant reduction in stream TP concentrations, there has been little change in the macroinvertebrate assemblages at Reedy Creek We believe that the differences in the macroinvertebrate metrics are primarily attributable to habitat.

Response: Comment noted. EPA is not finalizing a TMDL for Reedy Creek.

48. **Comment:** There are no incremental benefits to chlorophyll a, cyanophyte biomass, or TP when load reductions occur for TN.

Response: Reductions in TN are required in the tributaries for the following reasons: 1) to provide control of excess primary productivity at time and places in the system where nutrient limitations is co-limiting or nitrogen-limiting; 2) to address the low dissolved oxygen impairments in the listed tributaries; and 3) to ensure protection of the downstream estuaries.

49. **Comment:** EPA has failed to consider different nutrient dynamics and impacts in canals and channelized waters.

Response: EPA acknowledges that nutrient dynamics may be different in canals and channelized waters; however, the impaired canals are classified as Class III waters and as such targets are developed to protect this classification of freshwaters (i.e., rivers and streams). EPA states in the final document that site specific alternative criteria (SSAC) may be required to address DO in channelized waters.

50. **Comment:** EPA should use a more reasonable approach in the development and implementation of the TMDLs. If the TMDL is implemented, it will lead to more uncontrolled growth and compound the situation. The beef cattle farmers will be forced to go to more intensive land uses because the economic return from cattle ranching and required investment of water control structures will be insurmountable for beef cattle operations.

Response: The approach used to develop nutrient targets in the final TMDLs is based on FDEP's ongoing criteria development process. EPA considers FDEP's approach to have considerable technical merit. Implementation of these TMDLs will be consistent with the activities prescribed in the LOPP. Farmers in the watershed are encouraged to incorporate source control strategies and edge-of-field BMPs to reduce the nutrient loadings from improved pastures. The landuse practices employed in the watershed cannot be allowed to cause or contribute to a downstream impairment. Sources that contribute nutrient loadings in excess of the TMDL are in violation of the Clean Water Act.

51. **Comment:** Reductions in nutrient levels are unlikely to result in significant improvements in canal aquatic flora and fauna.

Response: Based upon the best data and information currently available, the nutrient targets in the TMDLs are considered protective of aquatic flora and fauna. Canals that are classified as Class III waters may require a SSAC to achieve the DO standard.

52. **Comment:** The EPA fails to establish a link or causal relationship between numeric targets and proposed TMDLs, i.e. assimilative capacity for each WQLS.

Response: In the approach FDEP is currently using for nutrient criteria development and piloted here, causal variables TN and TP are correlated with biology in streams with minimal disturbance to project protective values of TN and TP. This approach can be expected to capture the relationship between nutrient targets and biological response. FDEP is confident the native flora and fauna are fully protective with the ranges of TN and TP concentrations observed in the reference streams.

53. **Comment:** The TMDL document contains editorial errors and technical deficiencies.

Response: The editorial errors and technical deficiencies identified in many of the public comments were addressed to the maximum extent possible to improve the readability of the report. It is not possible to list every editorial error identified in these comments as many are no longer applicable or are considered minor (e.g., punctuation, grammar, etc).

54. **Comment:** The BOD target for WBID 3186B is not valid. High BOD in the Kissimmee River is attributed to soils (natural condition) and not anthropogenic sources; therefore, a TMDL should not be required.

Response: EPA considers the approach used to develop the BOD target conservative. The commenter acknowledges low-intensity cattle grazing occur in the WBID and cattle are considered an anthropogenic source that has the potential to contribute high BOD concentrations.

To address the DO impairment in this WBID, EPA is allocating loads to BOD and not nutrients in order to achieve the designated use. The BOD and DO data used in the analysis included only those samples where valid BOD and DO samples were collected on the same date and depth. DO and BOD data did not show significant variations when collected at varying depths. BOD samples that had negative values or laboratory remark codes indicating issues with the analytical results were excluded from the analysis. Data collected at three of the nine sampling events were excluded because of invalid BOD data. The commenter noted that the correlation was unduly influenced by a single high BOD value, without which there would be no relationship. The analysis was re-evaluated without this and other data not collected at uniform depths and a correlation was found validating the relationship between DO and BOD. In the revised analysis the percent reduction is about 25% which is comparable to the value in the final TMDL (38%).

References:

FDEP, 2007. Technical Support Document: Derivation of the Numeric Nutrient Thresholds for Total Nitrogen and Total Phosphorus in the Lake Okeechobee Tributaries, May 2007.